

In this Embodiment, as shown in Figure 8, the output of the bias power supply 17 is separated from or is floated with respect to the ground and is connected through the transformer 29 to the stage electrode 3. A current circuit is provided in such a way that the current can return to the transformer from facing electrodes 2a and 2b through low pass filters 13a and 13b.

IN THE CLAIMS:

Please amend claims 1-3, 7 and 8 as follows:

1. (amended) A plasma processing apparatus to provide plasma processing of a substrate by plasma, said plasma processing apparatus comprising a plasma processing gas supply means, an exhaust means in a plasma process chamber, and a plasma generating means, said plasma generating means further comprises:

a capacitatively coupled discharge means consisting of mutually isolated multiple conductors,

an electromagnetic wave radiating means to cause radio frequency displacement current to flow between said conductors and to emit electromagnetic wave, and

a magnetic field forming means;

wherein said electromagnetic wave radiating means further comprises a radiated electromagnetic wave power control means to control the radiated electromagnetic wave power through radio frequency displacement current control means forming a resonant circuit.

2. (amended) A plasma processing apparatus to provide plasma processing of a substrate by plasma, comprising :